Remarks

The various parts of the Office Action (and other matters, if any) are discussed below under appropriate headings.

Allowable Subject Matter

The indication of allowability of claims 4-6, 8, 19, 26 and 28 if rewritten in independent form has been noted with appreciation. Claim 4 has been placed in independent form, claim 7 has been amended to place it in independent form and include the features of allowable claim 8, claim 18 has been amended to place it in independent form and include the features of allowable claim 19, claim 25 has been amended to place it in independent form and include features of allowable claim 28, and claim 26 has been placed in independent form. Accordingly, claims 4, 7, 18, 25 and 26 are believed to be in a condition for allowance.

Specification

The specification is objected to for containing typographical errors. Additionally, the title of the invention is objected to for not being descriptive.

By way of the forgoing amendments to the specification, the objection has been rendered moot. Accordingly, withdrawal of the objection to the specification is respectfully requested.

Claim Objections

Claim 12 is objected to for failing to further limit claim 7. Claim 26 is objected to because in line 6 “third” should be changed to “second”. By way of the forgoing amendments to claims 12 and 26, the objection has been rendered moot. Support for the amendment to claim 12 can be found, for example, in paragraphs [47] and [80]-[81] of the specification.

Accordingly, withdrawal of the rejection of claims 12 and 26 is respectfully requested.

Claim Rejections - 35 USC § 112

Rejection of Claims 10, 11, 21 and 22

Claims 10, 11, 21 and 22 stand rejected under 35 USC §112, first paragraph as failing to comply with the enablement requirement (claim 22 is rejected for depending on rejected claim 21).

Claims 10 and 11 have been amended to depend from claim 7 and, thus, the rejection of claims 10 and 11 is believed to be moot.

Claim 21 has been amended to depend from claim 18 (which is directed to Fig. 10) and, thus the rejection of claim 21 is believed to be moot.

Accordingly, withdrawal of the rejection of claims 10, 11, 21 and 22 is respectfully requested.

Rejection of claim 27

Claim 27 stands rejected under 35 USC §112, second paragraph as being indefinite. In particular, the Examiner states that claim 27 recites first and third regions disposed in first and second planes which are spaced apart in a direction of light output. However, parent claim 25 recites the first and third regions are part of the at least one portion (i.e., the at least one portion of the light-output surface of the backlight as defined in claim 1). The Examiner then states that the light-output surface of the backlight appears to occupy one plane and, therefore, claim 27 is inconsistent with claim 1 since it is not clear how the first and third regions could both be part of the light-output surface of the backlight and yet lie in different planes in the light output direction.

It is respectfully submitted that the light-output surface is not necessarily planar, as shown in Figs. 4 and 20B. Fig. 4 shows first and second regions, and Fig. 20B shows first, second and third regions. Claim 1 does not limit the light output surface to be on one plane, nor does the specification disclose that the light-output surface of the backlight is limited to one plane.

In view of the above explanation, withdrawal of the rejection of claim 27 is respectfully requested.

Claim Rejections - 35 USC § 102 and § 103

Claims 1-3, 25 and 29-39 stand rejected under 35 USC §102(b) as being anticipated by *Bhagavatula* (US 6,137,456). Claims 1-3, 7, 9, 12-17, 25, 30 and 35-39 stand rejected under 35 USC §102(a) as being anticipated by *Appeldorn* (US

5,432,876). Claims 18, 20, 23 and 24 stand rejected under 35 USC §103(a) as being unpatentable over *Bhagavatula* in view of *Ohta* (US 4,678,285). Withdrawal of the rejections is respectfully requested for at least the following reasons.

Claim 1 has been amended to further recite that dividers dividing the at least one portion and the plurality of first regions *are integrally part of the backlight*. The device according to claim 1 provides a display that can be switched between single-view and multiple-view modes of operation without requiring the presence of additional components of significant weight, size and cost. Relatively thin multi-mode displays can therefore be provided with little or no additional complication, weight, thickness or costs compared even with known types of single-view or 2D displays. Efficient use of light generated in the backlight can be achieved, and the brightness in the respective modes of operation may be controlled substantially independently, for example, so as to have equal brightness in the single-view mode and in the multiple-view mode.

Bhagavatula

Bhagavatula discloses an electronic display for 2D and 3D viewing. The display includes a backlight 10, an LCD 36, and a light blocking module 18 arranged between the backlight and LCD (see Fig. 1). The light blocking module 18 comprises an electrically switchable material that enables selective transmission of light from the backlight to the LCD. Figs. 4 and 5 show the basic structure of a light blocking module that has a "comb" electrode structure. When the comb structure is not activated, a uniform plane of light is allowed to pass through the LC element to illuminate the transmissive electronic display so as to produce a 2D image. When the comb structure is activated, a series of thin uniform bright lines are generated, which provide the requisite lighting to view 3D images.

It is noted that the device disclosed in *Bhagavatula* is similar to the prior art device shown in Fig. 1A of the present application. More specifically, the light blocking module 18 of *Bhagavatula* appears to be similar to the parallax barrier 3 of Fig. 1A of the present application.

In contrast to *Bhagavatula* and other prior art devices as shown in Fig. 1A that require the use of a parallax barrier attached to the backlight, the device according to claim 1 does not need such parallax barrier. In the device according to claim 1 the backlight is divided into a specific structure so that switching between two modes of operation (2D or 3D) is possible.

Prior art device such as those disclosed in *Bhagavatula* use a switchable parallax barrier (light blocking module 18 and shadow mask 34 of *Bhagavatula,* Fig. 1) in order

to achieve 3D display. In the display system of *Bhagavatula*, any portions of the system that may be interpreted as having regions arranged to output light in a multiview mode would be within the light blocking module 18. As can be seen in Fig. 1 of *Bhagavatula,* the light blocking module 18 is *not integrally part of the backlight*. Accordingly, *Bhagavatula* fails to disclose that dividers dividing the at least one portion and the plurality of first regions are integrally part of the backlight as recited in amended claim 1.

Accordingly, amended claim 1 is distinguishable over *Bhagavatula.*

Appeldorn

Appeldorn discloses an illuminating device that includes optical fibers. According to *Appeldorn*, the optical fibers include light emitting regions along a portion of their length, wherein the light emitting regions comprise a plurality of optical elements spaced along the fiber. Fig. 1 of *Appeldorn* illustrates an exemplary fiber with the optical elements in the form of a notch. As light strikes the surface 6 of notch 4, the light is reflected down and out wall 8 of the fiber (see col. 7, lns. 21-68). In Figs. 10 and 11, *Appeldorn* shows the fibers in use with a liquid crystal shutter array 50. Red light is transmitted through the first fiber of every three, green light through the second of every three, and blue light through the third of every three (see column 12, lines 39-64).

In rejecting claim 1 based on *Appeldorn*, the Examiner takes the position that a fiber is a backlight and wall 8 of the fiber is a light output surface, wherein the output regions for carrying red light are a first region, and output surfaces for other fibers in conjunction with the fibers for red light as the whole of the at least one portion.

Appledorn, however, fails to teach the features of amended claim 1. More specifically, *Appledorn* fails to disclose that the fibers (i.e., the alleged backlight) include dividers dividing the at least one portion and the first regions.

Further, *Appeldorn* expressly provides that ***each group of three fibers and their corresponding shutter defines a pixel*** (see column 12, lines 65-67). Therefore, the *Appeldorn* device would appear not capable of multi-view mode simply by using every third (red) fiber as alleged by the Examiner. For example, if the fiber pattern is such that a first group of three fibers has R1, G1 and B1 fibers, and a second adjacent group of three fibers has R2, G2 and B2 fibers, this pattern defines two adjacent pixels. Illuminating only R1 and R2 results in ***two adjacent pixels*** providing a red output (i.e., no spacing is created for multi-view). The net result is simply two adjacent pixels having various levels of red (based on the intensity of R1 and R2), and not a 3D red display as alleged by the Examiner.

Accordingly, amended claim 1 is distinguishable over *Appeldorn*.

The remaining art to *Ohta* has not been found to make up for the deficiencies of *Bhagavatula* and *Appledorn*.

In view of the above, withdrawal of the rejection of claim 1, and the claims dependent therefrom, is respectfully requested.

Unaddressed issues

The dependent claims recite still further features of the invention not found in a combination similar to that claimed. Inasmuch as the dependent claims are allowable for at least the same reasons as the claims from which they depend, the Examiner's comments in respect thereof need not be addressed and this should not be construed to be an acquiescence in the contentions made by the Examiner.

Conclusion

In view of the foregoing, request is made for timely issuance of a notice of allowance.

Respectfully submitted,
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